

## ABSTRACT

Disclosed is an automated test equipment – ATE - (200) having a tester-per-pin architecture with a plurality of individual decentralized per-pin testing units (700), wherein each per-pin testing unit (700i) being adapted for testing a  
 5 respective DUT-pin (di) of a device under test – DUT - (600) by emitting stimulus response signals to the respective DUT-pin and/or receiving stimulus response signals from the respective DUT-pin. For testing the DUT, the following steps are executed:

defining – for a testing sequence - the DUT into one or more DUT-cores  
 10 representing one or more functional units of the DUT and covering one or more DUT-pins of the DUT, and

assigning - during the testing sequence - one or more of the per-pin testing units (700i) to one or more ATE-ports (210-240), whereby each ATE-port comprises one or more of the per-pin testing units (700i) and represents an  
 15 independent functional testing unit for testing one or more of the DUT-cores during the testing sequence.

[Fig. 2 for publication]

20